

Ninyo & Moore

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Transmittal

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To: **Eric Johnson**Date: **9-12-05**Firm: **USEPA**Fax No: **303
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Address:

Telephone
No:

From:

AL RidleyTotal Pages
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Transmittal:**8**

Subject:

HECLA POND #2

Project No:

☐ Urgent☐ For Approval☒ For Your Use☐ Please Reply☐ As Requested

Original Document:

☐ Will Not Follow☐ Will Follow☐ By U.S. Mail☐ By Other**Eric,**

Here is the letter with the reference to the full investigation and sampling performed October, 2001. I am interested in the chemical analyses performed in accordance with the Sept 18, 2000 Work Plan. See the proposed sampling and analyses in the pages I have attached from that plan.

Thanks,**AL**

- Geotechnical Engineering
- Engineering Geology
- Materials Testing and Inspection
- Construction Management
- Engineering Design
- Environmental Engineering
- Environmental Site Assessments
- Regulatory Compliance and Permitting
- Water Quality and Resource Evaluations
- Hazardous Waste Management
- Soil and Groundwater Remediation
- Asbestos and Lead-Based Paint Surveys
- Geophysical Studies
- Mineral Resource Evaluations
- Value Engineering
- Forensic Studies
- Expert Witness Testimony

Sampling Plan

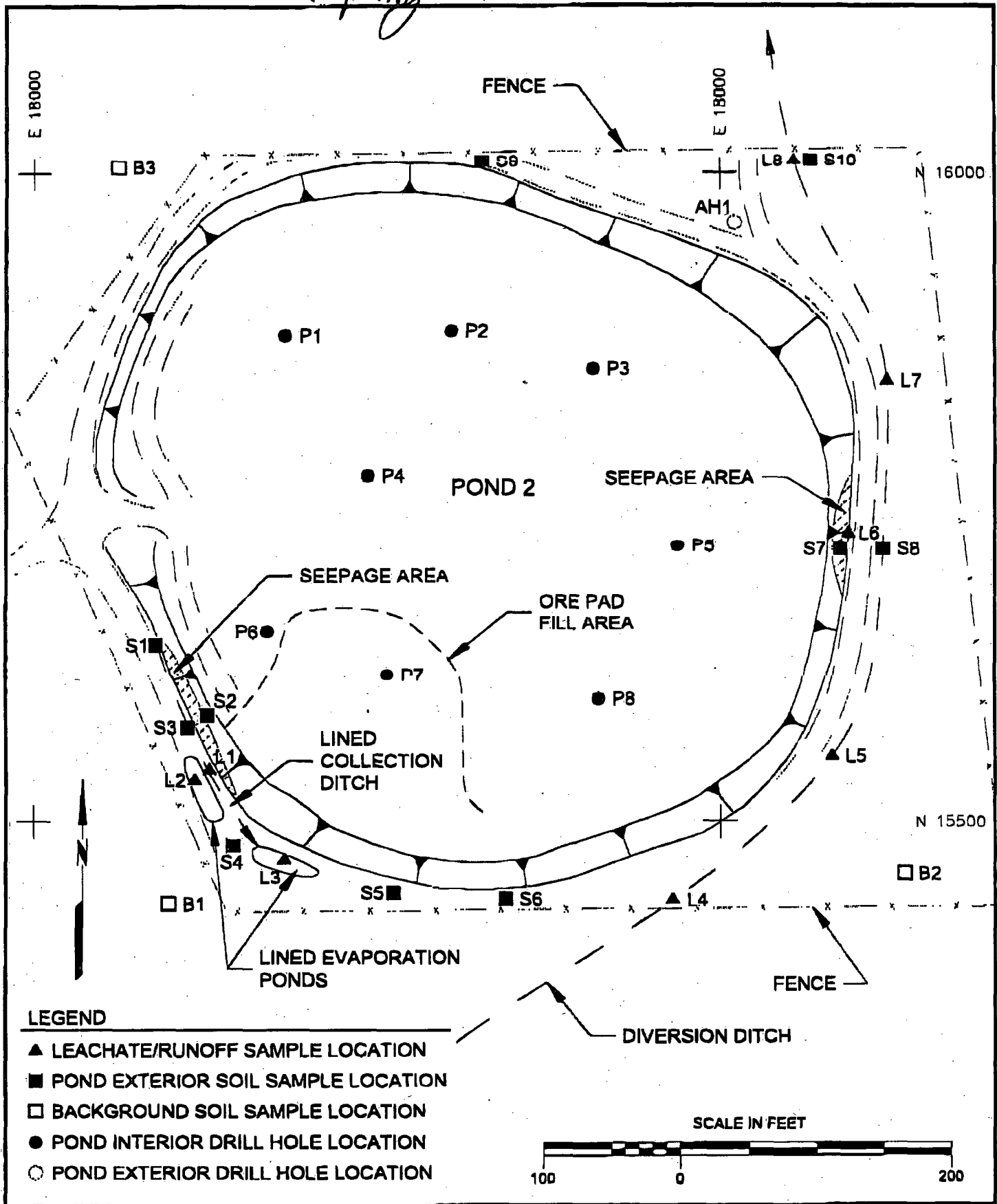


Table 1 Leachate and Runoff Sample Parameters, Methods, and Detection Limits for Laboratory Analysis

Constituent	Method	Detection Limit (mg/L unless noted)
Arsenic	206.2	0.001
Barium	200.7	0.002
Cadmium	200.7	0.0024
Chromium	200.7	0.005
Mercury	245.1	0.0002
Lead	239.2	0.001
Selenium	270.2	0.001
Silver	200.7	0.006
Cobalt	200.7	0.005
Copper	200.7	0.003
Iron	200.7	0.020
Manganese	200.7	0.002
Mercury	245.1	0.0002
Nickel	200.7	0.023
Selenium	270.2	0.001
Sodium	200.7	0.088
Tungsten	200.7T	0.020
Zinc	200.7	0.003
Calcium	200.7	0.013
Sulfate	300.0	0.3
Chloride	300.0	0.2
Ammonia	350.3 ISE	0.1
Nitrate	300.0 IC	0.05
Nitrate + Nitrite	353.2	0.02
TPH - Gasoline	8015M	0.010
TPH - Kerosene	8015M	0.2
TPH - BTEX	8015M	0.001
TSS	160.2	0.1
Halogenated Volatile Organics	601/8010	0.0005 - 0.002
Semi-Volatile Organics	8270C	
Gross alpha	900.0	1 pCi/l
Gross beta	900.0	1 pCi/l

in quality assurance/quality control programs equivalent to those followed by EPA. The sample analysis strategy incorporates a staged approach as outlined below

First stage. All of the collected samples will be submitted for laboratory analysis. If requested, sample splits or duplicate samples will be provided to EPA (or other parties) in the field at the time of sample collection. The first stage will consist of a total constituent analysis for the List A and B parameters in Table 1. The analysis results for the List A and B parameters will be used to distinguish material types along with sample descriptions from field logging.

Based on EPA guidelines, the total concentrations for the eight toxic metals can be compared with a value of 20 times the TCLP limit to conservatively assess TCLP characteristics. These results will be used to decide whether TCLP or other analyses will be conducted as a second stage of testing.

Second stage. The second stage of sample analyses is based on the first stage results. For samples collected within Pond 2, the second stage will consist of two elements. First, 10 percent of the collected samples within Pond 2 will be randomly selected and analyzed for the List C parameters in Table 1. Second, for samples with total concentrations above 20 times the TCLP limit, those samples will be analyzed with the TCLP test for metals (EPA Method 1311).

For samples collected outside of Pond 2, analyses will be conducted on samples with total metals values above 10 percent of corresponding metals values from Pond 2 waste materials. Analyses will consist of meteoric water batch leach tests (such as EPA Method 1312), with analysis for the List A and B parameters in Table 1.

2.5 Quality Assurance

All sampling activities will be performed in a manner consistent with EPA Region VIII's Field Sampling Guide, and the QA/R-5 (EPA, 1996, 1998) as well as EPA (1986). Quality assurance methods are described in the Quality Assurance Project Plan (QAPP) included as Attachment A to this work plan.

Auger holes will be backfilled after completion of logging and sampling, and closed in accordance with applicable requirements from the Utah State Engineer's Office. Any exposed waste will be backfilled beneath the depth of the cover of Pond 2.

The depth and location of hand augering or drilling within Pond 2 will be maintained to protect the existing synthetic liner beneath Pond 2. Hand augering or drilling will be limited to within five feet above the existing liner system. Gallium and germanium process tailings comprise the bottom layer of material in Pond 2, with this layer estimated from Hecla information to range from 10 to 20 feet thick. Excavation or drilling will generally be into the gallium and germanium process tailings, with no need to excavate or drill any closer than five feet above the liner.

Decontamination. Decontamination procedures are described in SOP No. 4, and are summarized below.

Drilling equipment in contact with waste materials will be decontaminated prior to leaving the site. Because sampling is to be conducted within drilling augers, i.e., because the auger surfaces will not be in contact with any soils to be collected for sample analysis, decontamination of augers between holes or trenches is not necessary.

Other sampling equipment (drilling samplers, hand augers, and other sampling tools) will be decontaminated after each use. The primary decontamination area will be a synthetically-lined area near the decant ponds. The secondary decontamination area will be an excavated or formed area within the cover on top of Pond 2, where rinse water can be collected and allowed to infiltrate.

2.4 Sample Analysis

Soil samples will be laboratory analyzed for the parameters listed in Table 1. Analysis will be performed according to methods included in EPA SW-846 (EPA, 1986), or other methods satisfactory to EPA. The laboratory will be selected based on Utah certification and participation

SOIL SAMPLING AND ANALYSIS WORK PLAN

Prepared For:
Hecla Mining Company
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Prepared By:
Shepherd Miller, Inc.
3801 Automation Way, Suite 100
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September 18, 2000



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ENVIRONMENTAL MGMT

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The Consent Order and Closure Work Plan follow a six-year comprehensive investigation and analysis of Pond 2, review and comment on the initial draft closure work plan, and tribal consultation. EPA is satisfied that the Consent Order and Closure Work Plan, as well as the environmental protection at Pond 2. Additionally, the Closure Work Plan will adequately mitigate the possibility of future leachate contamination and address unforeseen closure performance problems.

Included for your information is a copy of the final Consent Order. Copies of Attachment A, the Closure Work Plan, were previously provided to you on April 2, 2004, and again on May 28, 2004. EPA views its settlement agreement with Hecia as a substantial victory for environmental protection in Indian Country and, particularly, for the Shivwits Band of Paiute Indian Reservation. EPA appreciates the Band's long-term cooperation in, and commitment to, this matter. If you have any questions regarding the settlement terms or related activities, please call me at (303) 312-6051, or the persons on my staff who are most knowledgeable about this matter, Amy Swanson, Enforcement Attorney, telephone number (303) 312-6906, or Eric Johnson, Environmental Scientist, telephone number (303) 312-6357.

Sincerely,



Assistant Regional Administrator
Office of Enforcement, Compliance
and Environmental Justice

enc: RCRA 7003 Consent Order

cc: Tara Marlowe, Paiute Tribe Environmental Director
Tod Smith, Whiteing & Smith
John Krause, BLA